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Proposed Maximum Residue Limit

PMRL2016-22

Trifloxystrobin

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Under the authority of the *Pest Control Products Act*, Health Canada's Pest Management Regulatory Agency (PMRA) has concluded that the addition of new uses on dried shelled pea and bean (Crop Subgroup 6C, except soybeans), and cereal grains (Crop Group 15) to the product labels of USF0728 325SC Fungicide, STRATEGO PRO Fungicide, and DELARO 325SC Fungicide, containing technical grades trifloxystrobin and prothioconazole, and the addition of new uses on Leafy Vegetables (except *Brassica* Vegetables) (Crop Group 4) and *Brassica* (Cole) Leafy Vegetables (Crop Group 5) to the product label of Luna Sensation, containing technical grades trifloxystrobin and fluopyram, are acceptable. The specific uses approved in Canada are detailed on the labels of USF0728 325SC Fungicide, STRATEGO PRO Fungicide, DELARO 325SC Fungicide and Luna Sensation, *Pest Control Products Act* Registration Numbers 31435, 31436, 31533 and 32107, respectively.

The evaluation of this trifloxystrobin application indicated that the end-use products have value and the human health and environmental risks associated with the new uses are acceptable.

Before registering a pesticide for food use in Canada, the PMRA must determine the quantity of residues that are likely to remain in or on the food when the pesticide is used according to label directions and that such residues will not be a concern to human health. This quantity is then legally established as a maximum residue limit (MRL). An MRL applies to the identified raw agricultural food commodity as well as to any processed food product that contains it, except where separate MRLs are specified for the raw agricultural commodity and a processed product made from it.

Consultation on the proposed MRLs for trifloxystrobin is being conducted via this document (see Next Steps, the last section of this document). A summary of the field trial data used to support the proposed MRLs can be found in Appendix I.

To comply with Canada's international trade obligations, consultation on the proposed MRLs is also being conducted internationally by notifying the World Trade Organization, as coordinated by Canada's Notification Authority and Enquiry Point.

MRLs are already established for prothioconazole in/on dried shelled pea and bean (Crop Subgroup 6C, except soybeans), and cereal grains (Crop Group 15). MRLs for fluopyram in/on leafy vegetables (except *Brassica* vegetables) (Crop Group 4) and *Brassica* (cole) leafy vegetables (Crop Group 5) will be consulted upon in a separate PMRL.

The proposed MRLs, to replace or be added to MRLs already established for trifloxystrobin, are as follows.

Table 1 Proposed Maximum Residue Limits for Trifloxystrobin

Common Name	Residue Definition	MRL (ppm) ¹	Food Commodity
Trifloxystrobin	methyl (α,E)- α -(methoxyimino)-2-[[[(1 <i>E</i>)-[1-[3-(trifluoromethyl)phenyl]ethylidene]amino]oxy]methyl]benzeneacetate, including the metabolite (α,E)- α -(methoxyimino)-2-[[[(1 <i>E</i>)-[1-[3-(trifluoromethyl)phenyl]ethylidene]amino]oxy]methyl]benzeneacetic acid, expressed as trifloxystrobin	30	Leafy greens (Crop Subgroup 4A), Leafy <i>Brassica</i> greens (Crop Subgroup 5B)
		9.0 ²	Leaf petioles (Crop Subgroup 4B)
		2.0	Head and stem <i>Brassica</i> (Crop Subgroup 5A)
		0.06 ³	Dried shelled pea and bean (Crop Subgroup 6C, except soybeans)
		0.05 ⁴	Cereal grains (Crop Group 15, except sweet corn, rice, and sorghum)

¹ ppm = parts per million

² The new crop subgroup MRL will replace the existing crop subgroup MRL of 3.5 ppm

³ The new MRL of 0.06 ppm (to cover trifloxystrobin and the acid metabolite CGA-321113) will replace the existing MRL of 0.02 ppm (to cover trifloxystrobin), based on the new foliar use pattern.

⁴ The MRL is proposed to be extended to the entire cereal grains crop group 15.

MRLs are proposed for each commodity included in the listed crop groupings in accordance with the Residue Chemistry Crop Groups webpage in the Pesticides and Pest Management section of Health Canada's website.

MRLs established in Canada may be found using the Maximum Residue Limit Database on the Maximum Residue Limits for Pesticides webpage. The database allows users to search for established MRLs, regulated under the *Pest Control Products Act*, both for pesticides or for food commodities.

International Situation and Trade Implications

MRLs may vary from one country to another for a number of reasons, including differences in pesticide use patterns and the locations of the crop field trials used to generate residue chemistry data.

Table 2 compares the MRLs proposed for trifloxystrobin in Canada with corresponding American tolerances and Codex MRLs.¹ American tolerances are listed in the Electronic Code of Federal Regulations, 40 CFR Part 180, by pesticide. A listing of established Codex MRLs is available on the Codex Alimentarius Pesticide Residues in Food website, by pesticide or commodity.

Table 2 Comparison of Canadian MRLs, American Tolerances and Codex MRLs (where different)

Food Commodity	Canadian MRL (ppm)	American Tolerance (ppm)	Codex MRL (ppm)
Leafy greens (Crop Subgroup 4A)	30	30	15 (Lettuce, head)
Leaf petioles (Crop Subgroup 4B)	9	9	1 (Celery)
Head and stem <i>Brassica</i> (Crop Subgroup 5A)	2	2	0.1 (Brussels sprouts) 0.5 (Cabbages, head) 0.5 (Flowerhead brassicas (includes Broccoli, Broccoli, Chinese and Cauliflower))
Leafy <i>Brassica</i> greens (Crop Subgroup 5B)	30	30	Not established
Dried shelled pea and bean (Crop Subgroup 6C, except soybeans)	0.06	0.06	Not established
Cereal grains (Crop Group 15, except sweet corn, rice, and sorghum)	0.05	0.05 (barley, field corn, popcorn, oat, wheat)	0.5 (Barley) 0.02 (Maize) 0.2 (Wheat)

¹ The Codex Alimentarius Commission is an international organization under the auspices of the United Nations that develops international food standards, including MRLs.

Next Steps

The PMRA invites the public to submit written comments on the proposed MRLs for trifloxystrobin up to 75 days from the date of publication of this document. Please forward your comments to Publications (see the contact information on the cover page of this document). The PMRA will consider all comments received before making a final decision on the proposed MRLs. Comments received will be addressed in a separate document linked to this PMRL. The established MRLs will be legally in effect as of the date that they are entered into the Maximum Residue Limit Database.

Appendix I

Summary of Field Trial Data Used to Support the Proposed Maximum Residue Limits

Residue data for trifloxystrobin in dry peas and dry beans were submitted to support the domestic use of the USF0728 325 SC Fungicide on crop subgroup 6C, except soybeans. Residue data for trifloxystrobin in head lettuce, leaf lettuce, spinach, cabbage, broccoli, cauliflower and mustard greens were also submitted to support the domestic use of Luna Sensation on crop groups 4 and 5.

Previously reviewed residue data from field trials conducted in/on corn (field, and popcorn), wheat, barley, and oats were reassessed in the framework of this petition to support the domestic use of USF0728 325SC, STRATEGO PRO, and DELARO 325SC Fungicides on CG15 (except sweet corn, rice, and sorghum). In addition, a processing study in treated wheat and corn was also reassessed to determine the potential for concentration of residues of trifloxystrobin into processed commodities.

Maximum Residue Limits

The recommendation for maximum residue limits (MRLs) for trifloxystrobin were based upon the submitted field trial data, and the guidance provided in the OECD MRL Calculator. Table A1 summarizes the residue data used to calculate the proposed MRLs for Crop Groups 4, 5, 6C (except soybeans) and 15 (except sweet corn, rice, and sorghum).

Table A1 Summary of Field Trial and Processing Data Used to Support MRLs

Commodity	Application Method/ Total Application Rate (g ai/ha) ¹	Preharvest Interval (days)	Lowest Average Field Trial Residues (ppm)	Highest Average Field Trial Residues (ppm)	Experimental Processing Factor
Head lettuce	Foliar/ 277-291	0	<0.29	2.50	
Leaf lettuce	Foliar/ 278-286	0	0.66	4.13	
Spinach	Foliar/ 279-289	0	4.82	10.41	
Celery	Foliar/ 276-289	0	<0.02	5.23	
Cabbage	Foliar/ 282-288	0	<0.04	0.60	
Broccoli	Foliar/ 275-291	0	0.46	0.70	
Cauliflower	Foliar/ 281-291	0	<0.02	0.36	
Mustard greens	Foliar/ 277-288	0	5.36	9.66	
Dry beans	Foliar/258-272	28-32	<0.02	<0.023	
Dry peas	Foliar/261-266	29-31	<0.02	<0.032	
Wheat	Foliar/122-137	34-75	<0.04	<0.04	1.05 (wheat bran)
Wheat	Foliar/247-263	31-62	<0.04	0.05	
Barley	Foliar/121-136	39-62	<0.04	<0.04	
Oats	Foliar/120-132	38-57	<0.04	<0.04	
Popcorn	Foliar/494	29-30	<0.04	<0.04	

Commodity	Application Method/ Total Application Rate (g ai/ha)¹	Preharvest Interval (days)	Lowest Average Field Trial Residues (ppm)	Highest Average Field Trial Residues (ppm)	Experimental Processing Factor
Field Corn	Foliar/494	28-34	<0.04	0.05	1.7 (corn oil refined)

¹ g ai/ha = grams of active ingredient per hectare

Following the review of all available data, MRLs as proposed in Table 1 are recommended to cover residues of trifloxystrobin and the acid metabolite CGA-321113. Total residues of trifloxystrobin in these crop commodities at the proposed MRLs will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.